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Natural Sciences and Engineering Research Council of Canada

NSERC Contact

Investing in people, discovery and innovation

Achieving Excellence

Editorial by NSERC President Tom Brzustowski

The Government's recent paper on innovation, "Achieving Excellence," is hugely important for the university research community. It builds on the Prime Minister's commitment to move Canada into the world's top five countries in R&D per capita, and to make Canada one of the most innovative countries in the world. But there's something more: Perhaps for the first time in history, research is seen as *central* to the Government's vision.

To start with, the title, "Achieving Excellence," is very gratifying because it reflects the principal value of the research community. The text also contains many statements of direct importance to university researchers. Let's look at some key quotes:

Under "The Knowledge Performance Challenge," the first goal is to "vastly increase public and private investments in knowledge infrastructure to improve Canada's R&D performance," and the targets include ranking among the top five countries in the world in terms of R&D performance and doubling the Government of Canada's current investments in R&D by 2010. The priorities in this section include:

- "*Support the indirect costs of university research.* Contribute to a portion of the indirect costs of federally supported research, taking into account the particular situation of smaller universities.
- "*Leverage the commercialization potential of publicly funded academic research.* Support academic institutions in identifying intellectual property with commercial potential and forging partnerships with the private sector to commercialize research results.
- "*Provide internationally competitive research opportunities in Canada.* Increase support to the granting councils to enable them to award more research grants at higher funding levels."

Under "The Skills Challenge," the goal is to "develop the most skilled and talented labour force in the world," and the targets include increasing the admission of Master's and Ph.D. students at Canadian universities by an average of 5 percent

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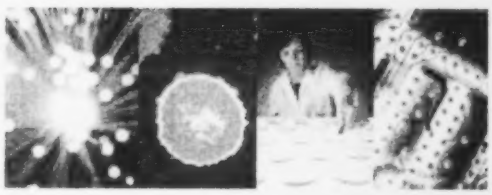

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NSERC is Canada's instrument for promoting and supporting university research in the natural sciences and engineering, other than the health sciences.

NSERC supports both basic university research through research grants and project research through partnerships among universities, governments and the private sector, as well as the advanced training of highly qualified people.

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per year until 2010, and significantly improving Canada's performance in the recruitment of foreign talent, including foreign students....."

To reach these objectives, the Government will consider taking the following steps:

- "Provide financial incentives to students registered in graduate studies programs, and double the number of Master's and Doctoral fellowships and scholarships awarded by the federal granting councils.
- "Create a world-class scholarship program of the same prestige and scope as the Rhodes scholarship; support and facilitate a coordinated international student recruitment strategy led by Canadian universities; and implement changes to immigration policies and procedures to facilitate the retention of international students.
- "Establish a cooperative research program to support graduate and post-graduate students and, in special circumstances, undergraduates, wishing to combine formal academic training with extensive applied research experience in a work setting."

Obviously, I strongly support the thrust of this document. I believe that when its goals are met Canada will be an even better country, better able to afford the quality of life we all want to enjoy.

But no one should think that achieving those goals will be easy. First of all, the amount of R&D carried out in the private sector will need to increase enormously, by as much as $20 billion per year according to some estimates. To support that R&D there will have to be a proportional increase in sales — about $200 billion per year since the companies involved will spend an average of 10% of sales on R&D. And those sales will have to be mostly in world markets. All of that to say that if Canada is to become an R&D powerhouse, it will have to become an export powerhouse at the same time.

But there must also be a huge increase in the number of highly qualified people to do the increased volume of R&D. If industry spends an average of $200,000 per year per R&D employee, then 100,000 additional R&D employees will have to be found by the end of the decade — not a large number when compared to our current work force of slightly more than 15 million, but a very large number indeed when compared with Canada's annual output of HQP in science and engineering. And that output already has other claims on it that are driven by the irresistible laws of demographics: about 7,000 Ph.D.'s to replace retiring professors, several thousand more to replace retiring government scientists, and a comparable or larger number to replace retiring industry personnel.

On the supply side, Canadian universities annually award about 2,000 Ph.D.'s, 5,000 Master's, and 27,000 Bachelor's degrees in engineering, mathematics, and science, and an additional fraction of those numbers in the other areas that NSERC supports. There are three other sources of HQP: immigration, retraining people already in the workforce, and repatriating Canadians now abroad. We cannot predict what proportions of these people will choose to engage in R&D in Canada, but we can be sure that not all will. In light of all that, I believe that I am on firm ground if I suggest that the graduation rate from Canadian universities of HQP at the Master's and Ph.D. levels in the NSERC areas will have to double, or perhaps even triple, to satisfy the increased demand in time to meet Canada's new goal.

But graduation rates depend on both the numbers of graduate students enrolled and the time that it takes to complete a degree. Completion times have been getting longer for decades, and the time from the Bachelor's degree to the Ph.D. has reached eight years in some disciplines — and eight years take us to the end of the decade.

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That may be acceptable if the goal is to produce the greatest amount of research output for the money invested, but it is not acceptable if the goal is to provide large numbers of highly qualified people for an economy waiting for them.

But more is needed than just quantitative change. Since a very large proportion of the new graduates with advanced degrees will be heading to industry, their graduate education will have to help them acquire some skills that are important for work in the private sector. These include the capacities for team work, for finding and using knowledge from outside of their own field, for project management, for entrepreneurship, for developing a business case, etc. Teaching such skills is not new; what is new is the need for routinely including it in graduate education in the NSE.

That frames the challenge to NSERC and to our research community. We must together learn how to increase graduation rates, but not sacrifice quality in the process. There are many factors at the university level and at the level of the individual professors and students that enter into consideration, but NSERC can only affect research funding and student support and the policies that govern them. We need to learn how best to help in meeting the new Canadian goals for R&D. And given the time scales of research and advanced training, we have only about two years to learn how to do it, if we are to contribute significantly to meeting Canada's goals for the end of the decade.

We have already started discussions with the universities collectively through AUCC, and with the graduate schools through CAGS, and we plan to hold five regional workshops across Canada to collect ideas from invited participants including professors, students, university officers, provincial officials and the private sector. We are not searching for a silver bullet. On the contrary, we are looking for a broad range of practical measures that will add up to a coherent strategy that is likely to provide the HQP that Canada will need, at the time when they are needed. NSERC will implement those measures that fall within our mandate, and we will count on our partners in this important national process to make their appropriate contributions as well.

New Year Brings New Faces to NSERC

When Prime Minister Jean Chrétien changed his Cabinet on January 15, NSERC acquired new representatives in Parliament: Allan Rock is Minister of Industry and Minister responsible for NSERC and Maurizio Bevilacqua is Secretary of State (Science, Research and Development).

Allan Rock

Industry Minister, Allan Rock

Since becoming Industry Minister, Allan Rock has been meeting academics and business and community leaders across the country. On February 12, he launched Canada's Innovation Strategy with Jane Stewart, Minister of Human Resources Development. The Strategy lays out a series of goals, targets and priorities for Canada to become one of the most innovative countries in the world. (See Dr. Brzustowski's editorial in this issue of *Contact*.) Minister Rock will be participating in a series of regional meetings, culminating in a National Summit this fall, to identify complementary actions by business, universities and all levels of government to meet these goals.

Mr. Rock entered political life in 1993, following a successful professional career as a trial lawyer. He became Canada's Minister of Health in June of 1997. As Minister of Health, his priority was to lay the groundwork for modernizing medicare. He also created the Canadian Institutes of Health Research.

Before becoming Minister of Health, Mr. Rock served as Minister of Justice and Attorney General of Canada, a post that he assumed following his first election to Parliament as MP for Etobicoke Centre in 1993. In the Justice portfolio he introduced strengthened gun control, Canada's first DNA legislation for criminal investigation, tough measures against organized crime and fairer and more effective child support laws.

Born in Ottawa, Mr. Rock received his B.A. and LL.B. from the University of Ottawa.

Maurizio Bevilacqua

Maurizio Bevilacqua

First elected as a Member of Parliament in the 1988 election, Maurizio Bevilacqua was re-elected in 1990, 1993, 1997 and 2000.

Mr. Bevilacqua served as Parliamentary Secretary to the Minister of Human Resources Development and to the Minister of Labour. He has also been Chair of the Standing Committee on Finance and the Standing Committee on Human Resources Development.

He holds a B.A. from York University in Toronto.

2002 NSERC Prize Winners Announced

The NSERC E.W.R. Steacie Memorial Fellowships, Doctoral Prizes, and Howard Alper Postdoctoral Prize are among Canada's most important research prizes.

The prestigious Steacie Fellowships are named after Dr. Edgar William Richard Steacie, a physical chemist who, as President of the National Research Council from 1952 to 1962, did much to encourage young researchers. Open to both women and men, the fellowships are awarded to enhance the career development of outstanding and highly promising scientists and engineers who are staff members of Canadian universities. Successful fellows are relieved of teaching and administrative duties for two years.

The $20,000 NSERC Howard Alper Postdoctoral Prize is awarded to a Canadian postdoctoral fellow in one of the natural sciences or engineering disciplines. Dr. Howard Alper donated $100,000 from the proceeds of the Gerhard Herzberg Canada Gold Medal for Science and Engineering that he won in 2000 to the setting up of the award.

The NSERC Doctoral Prizes are awarded in recognition of high-quality research conducted by students completing their doctoral degrees. There are two awards in the natural sciences and two in engineering; each winner receives a $5,000 cash prize and a silver medal from NSERC.

The winners of the 2002 NSERC prizes were announced in early March by Maurizio Bevilacqua, Secretary of State (Science, Research and Development), on behalf of Allan Rock, Minister of Industry and Minister responsible for NSERC, and by Tom Brzustowski, President of NSERC.

The prizes will be presented at a ceremony during which the winner of the Gerhard Herzberg Canada Gold Medal for Science and Engineering will also be honoured.

For additional information on the winners, visit www.nserc.ca.

2002 NSERC Steacie Fellows

Dr. Louis Bernatchez
Université Laval
Process of Speciation

Dr. Louis Bernatchez

Dr. Louis Bernatchez's cutting-edge research into the process of speciation combines molecular genetics with ecology.

He and his research team are attempting to show how different populations of freshwater whitefish that originally belonged to the same species can evolve into new species through interactions with their environment.

Having studied the influence of historical and ecological factors that led to the differentiation, Dr. Bernatchez will use his Steacie Fellowship to develop the resources and expertise needed to establish the genetic basis for it.

His studies have not only contributed to biodiversity conservation, but they have found commercial applications in the fishing industry.

Dr. Elizabeth Cannon
University of Calgary
Satellite Navigation Tools

Dr. Elizabeth Cannon has been a driving force in the research and development of satellite navigation tools. Her five Global Positioning System-related software packages have been licensed or sub-licensed to more than 4,000 organizations worldwide. Applications include a company that has used the software to develop wildlife tracking collars, and GPS software that is rapidly replacing the use of gyroscopes, for pitch and azimuth determination, on board ships.

Dr. Elizabeth Cannon

Dr. Cannon's research as an NSERC Steacie Fellow will include developing algorithms and error modelling to provide the best mathematical ways to merge the two different types of information provided by the GPS and inertial navigation systems. Her goal is to develop a car-based system able to continuously position a vehicle to centimetre-level accuracy in real-time.

Henri Darmon
McGill University
Elliptic Curve Equations

Dr. Henri Darmon's study of complex multiplication theory and elliptic curves has gained him recognition as one of the world's leading young number theorists.

Dr. Henri Darmon

Elliptic curves played a central role in Andrew Wiles' famous 1994 proof of Fermat's Last Theorem, for which Dr. Darmon wrote one of the leading expositions.

In his most recent work, Dr. Darmon reveals that complex multiplication theory is only a part of a more general framework for solving elliptic curve equations. The work is the first broad advance in solving these equations since an approach Kurt Heegner developed in the 1950s.

The new NSERC Steacie Fellow will continue to search for a proof to the identities that he's numerically verified.

Dr. Wolfgang Jäger
University of Alberta
Terahertz Spectroscopy

Dr. Wolfgang Jäger's cutting-edge spectroscopic techniques are providing fundamental new insights into the weak molecular forces that are crucial to understanding phase transitions and the nature of liquids.

In the mid-1990s, Dr. Jäger's research team built a state-of-the-art Fourier transform microwave spectrometer, including a powerful Terahertz radiation source.

Dr. Wolfgang Jäger

With his NSERC Steacie Fellowship, Dr. Jäger will extend his research into the nascent field of helium nanodroplet isolation spectroscopy. The new spectrometer his research group will build — the first of its kind in Canada and one of only a few in the world — will enable them to trap larger molecules in super-fluid helium droplets and to analyze them inside this "ultra-cold nano-laboratory."

Dr. Alejandro Marangoni
University of Guelph
Physical Properties of Fats and Oils

Dr. Alejandro Marangoni

Dr. Marangoni's research is providing food for thought for both theoreticians and industrial food chemists by helping to establish a new area of study into the so-called micro- or nano-scale structure of not just fats and oils, but other foods as well.

His research has demonstrated that exactly the same fat crystal structure can result in substantially different textures of, for example, butter, depending on the shape and size of the conglomerates they form and how these crystals are arranged in space — their crystal network. The research will enable food processors to better predict the characteristics of their finished products. It might also offer insights for the treatment of fat-related medical conditions, including atherosclerosis.

Dr. Marangoni's Steacie-sponsored research will continue to quantify the relationship between a food's texture and its fat crystal network structure, and particularly how mixing a liquid predetermines the structure of the subsequent solid.

Dr. Jerry Mitrovica
University of Toronto
Earth Systems Modelling

Dr. Mitrovica's interdisciplinary study of the dynamic interplay between the atmosphere, water, continents and the deep Earth has provided fundamental new insights into the functioning of our planet. His research was amongst the first to demonstrate vertical plate tectonics — that the same process that moves continents sideways also moves them up and down.

Dr. Jerry Mitrovica

A member of the Canadian Institute for Advanced Research's Earth System Evolution Program group, Dr. Mitrovica and his colleagues have recently shown that melting polar ice sheets each have geographically distinct "sea-level fingerprints," and his work provides a powerful new method for determining the individual sources of global sea-level rise.

As an NSERC Steacie Fellow, Dr. Mitrovica will continue developing a computerized 3-D model of an ice age Earth. This numerical model will enable unprecedented analysis of past and future Earth changes.

Recipient of the 2002 NSERC Howard Alper Postdoctoral Prize and a 2002 NSERC Doctoral Prize

Dr. Rees Kassen
McGill University
Biodiversity and Environmental Heterogeneity

Dr. Rees Kassen's series of bench-top biodiversity and evolutionary theory experiments represent the first experimental proof for a link between environmental variability and species diversity.

In conjunction with his thesis supervisor Dr. Graham Bell, and using single-celled bacterial and algal populations, he was able to observe from dozens to hundreds of generations of the clonally reproducing microbes and to completely control their environment.

Dr. Kassen grew up in Vancouver and is now a postdoctoral fellow in the Department of Plant Sciences at the University of Oxford.

2002 NSERC Doctoral Prize Winners

Aleksander Czekanski
University of Toronto
Finite Element-Based Contact Simulations

Dr. Aleksander Czekanski, working with his doctoral supervisor Dr. Shaker Meguid, has developed a unique computer modelling technique that could enable designers to test the crashworthiness of their ideas with bits and bytes rather than with metal against brick.

He developed prototype software and the underlying algorithms by applying recent advances in mathematics and computer modelling to a traditional engineering problem.

Originally from Poland, Dr. Czekanski moved to Canada for his Ph.D. He is currently a postdoctoral fellow at the University of Toronto.

Douglas Ashley Monks
Simon Fraser University
Sex Hormones, Cadherin and Neural Plasticity in the Adult Nervous System

Dr. Ashley Monks has uncovered molecular evidence for how sex hormones work to rewire the adult brain and various motor neurons in rats.

In conjunction with his thesis supervisor Dr. Neil Watson, he demonstrated that, in rats, sex hormones trigger the production of N-cadherin, which is responsible for remodeling key components of the central nervous system.

The Montreal native is now a Canadian Institutes of Health Research postdoctoral fellow at Michigan State University.

Dr. Mathini Sellathurai
McMaster University
A New Technique for High-Speed Wireless Communication

Dr. Mathini Sellathurai is developing technology that could soon provide laptops with high-speed wireless connections.

After visiting Lucent Technology's Bell Labs in New Jersey with her Ph.D. supervisor Dr. Simon Haykin in 1999, she decided to apply the wireless communications coding principle called Turbo to Jerry Foschini's Bell Labs Layered Space-Time (BLAST) architecture. Her insights increased the speed and reliability of this multi-send and receive antennae system by creating an iterative, two-decoder process, called Turbo-BLAST.

Originally from Sri Lanka, Dr. Sellathurai emigrated to Canada for her doctoral studies. She's currently a research scientist with the Communications Research Centre in Ottawa.

Call for Letters of Intent (LOI):

New Networks of Centres of Excellence (NCEs)

Deadline for LOIs: July 12, 2002
A competition is being held to create new Networks of Centres of Excellence (NCEs). It is anticipated that two or three successful new Networks will begin operations in fall 2003.

Scope of support
Approximately $12 million annually over seven years.

Who may apply?
Canadian researchers and their partners from the private and public sectors.

All research areas are eligible.

2005 competition also open to all research areas
Applicant groups unsuccessful at the LOI stage in the 2003 competition may reapply with a new Letter of Intent in the 2005 competition. Additional details on the 2005 competition will be announced in early 2003.

For detailed information
See "Call for Proposals" at www.nce.gc.ca/comp_e.htm.

NSERC Concourse Continues to Bring People Together

Launched in May 2000, the NSERC Concourse Web site continues to provide a venue for students, researchers and companies to find research partners. Participants may submit descriptive postings via e-mail, under four headings: For Students, For Researchers, For Companies, and Job Postings.

The NSERC Concourse is a free service open to individuals and organizations involved in research areas that fall under NSERC's mandate.

For more information see our Web site at www.nserc.ca/match/main-e.htm.

eBusiness Update

The eBusiness team has been busy organizing presentations and site visits as key projects advance to the testing and implementation phases. On February 28, eBusiness representatives held a focus group meeting with university administrators to give them an overview of the electronic submission process and discuss a number of upcoming projects.

The eBusiness team is also looking for contact names of information technology specialists in the universities. According to project director Christiane Villemure, "close collaboration with IT specialists in the universities is critical because our systems are being developed in parallel. They have to know what demands our new services will make on their internal systems and plan for upgrades if need be."

Pilot testing of electronic submission modules is scheduled to begin soon. A demonstration site has been developed to allow pilot volunteers recruited from the university community and from within NSERC to evaluate the design and functionality of new modules (e.g., Account Management, User ID, eConsole). The demonstration site is expected to remain in place beyond the actual implementation of the new on-line application system, and the feedback received will in part be used to develop training materials.

eBusiness analysts have been working on the electronic version of Form 300. This new version will allow universities to submit financial statements on-line, thereby eliminating the need to print the form for each grant. It will also allow NSERC to upload data directly to its corporate database, making it easier for both parties to manipulate, analyze and share data. After all, the main goal of the project is to reduce the administrative burden on researchers and universities.

For the latest on the eBusiness Project, visit our Web site at www.nserc.ca/e/index_e.htm.

NSERC Newsbureau Activities

Our media highlight of 2001 was, without doubt, the coverage given to the NSERC Herzberg Medalist, which amounted to at least 45 mentions in newspapers, TV and radio. When we tallied up the number of press clippings for 2001, we saw a substantial 46 percent increase in the number of NSERC mentions over the previous year. Readership of the stories, at 43 million, is up 14 per cent from 2000, and their equivalent advertisement value, at $703,000, is up 26 percent.

The Newsbureau has enjoyed increasing success with its promotion of NSERC and its researchers. The University of Lethbridge's Jean Choi's research into men's and women's sense of direction was featured on ABC Radio's (US) Paul Harvey Show, which is syndicated worldwide, while the University of Manitoba's Martin Scanlon saw his texturing of french fries covered on both CNN and CTV. Daniella O'Neil's work on how children's story-telling can indicate future intellectual abilities was covered in *Le Quotidien*. The University of Waterloo researcher is also slated for TV coverage later in 2002. University of British Columbia professor Steve Johnston's theory on how British Columbia originally bumped into and joined Canada was featured in the *Ottawa Citizen* and the *National Post*. He was also interviewed on CBC Radio's *Quirks & Quarks*. Finally, chemistry rocks! Saint Mary's University's singing professor Cory Pye made it onto TV shows *@discovery.ca* and MuchMusic with his customized rock 'n roll renditions of chemical formulae and principles.

Synergy Awards Make Their Mark... at the Olympics ... and at Home

Two of the 2001 Synergy Awards have gone a long way since they were bestowed in November.

Kodak Canada Inc., a winner in the "Large companies category," proudly displayed its Synergy ("Flight of Geese") sculpture at the 2002 Olympic Winter Games in Salt Lake City.

Dr. Peter McVetty

And Dr. Peter McVetty, one of the university collaborators involved in the other Synergy award in the "Large companies category," has decided to take his $25,000 research grant and put it in trust, to create a new award. He says he thought of establishing the award because he feels that the essential contributions of support staff in his department (Plant Science) at the University of Manitoba have largely gone unrecognized. The exact details are still being worked out, but the CanAmera Foods-NSERC Endowment Fund should soon become a reality. The intent is to financially reward an individual or a group demonstrating innovation — for instance, in the development of new research methods and techniques that have a significant effect on the quality and/or quantity of research done in the Plant Science Department. He hopes that the first award will be made in 2003.

University - Industry Synergy

The 2002 Awards

If you know an individual or group involved in an outstanding university-industry collaborative effort in the natural sciences and engineering, nominate them for a 2002 award. You may even nominate yourself! The deadline for nominations for the award, which is jointly sponsored by NSERC and The Conference Board of Canada, is **May, 31, 2002**.

For further information, visit the Web site at www.nserc.ca/synergy, call (613) 996-2335, or send an e-mail to synergy@nserc.ca.

Results of the First Tri-Agency IPM Competition

In June 2001, NSERC teamed up with its sister granting agencies — the Canadian Institutes of Health Research and the Social Sciences and Humanities Research Council — to launch a concerted new and expanded Intellectual Property Management (IPM) program with the goal of accelerating the transfer of knowledge and technology resulting from university- (and hospital-) based research.

The first joint IPM competition attracted 47 applications from across the country requesting a total of $8.5 million in year one (2001-02). Thirty-nine grants worth $4.2 million in year one were awarded, based on the recommendations of the selection committee members, specialists from differing backgrounds with experience in technology transfer and the management of intellectual property. Fourteen of the applications were from groups of universities or universities and affiliated hospitals.

In making their grant recommendations, the selection committee members commented on:

- the importance for Canada of the technology transfer offices seizing opportunities to integrate their expert resources and activities with those of other institutions;
- the need for at least one individual within each institution, to be the first point of contact and build relationships with faculty; and
- the importance of institutions networking with other institutions within a province, or region, or even nationally, to promote education and training initiatives, and exchange best practices and information on complementary technologies.

Calling for International Collaboration in Materials Research

NSERC and its counterpart agencies in Argentina, Brazil, Chile, Colombia, Mexico and the US have created a pilot initiative to foster collaborative activities in materials research. NSERC hopes to fund a small number of high quality research projects that present a special opportunity for Inter-American collaboration. Proposals to support pre-research activities to establish new Inter-American collaborations will also be entertained. Visit our Web site at www.nserc.ca/intnew.htm for more information.

Network Aims to Increase the Productivity of the Canadian Swine Industry

The swine industry is big business in Canada, employing almost 100,000 people. Approximately 25 million pigs were produced in Canada in 2001 and almost half of the production is exported world wide. However, the industry incurs nearly $80 million per year in losses due to infectious diseases. Reducing this toll is the challenge of the Canadian Research Network on Bacterial Pathogens of Swine, which was created in April 2000.

The network, the first of its kind in Canada, is led by Dr. Mario Jacques of the Université de Montréal's Faculté de médecine vétérinaire. It teams up approximately 30 highly qualified researchers, including veterinarians, microbiologists, molecular biologists and immunologists from 11 university and government research centres across Canada, including all four Canadian veterinary colleges.

The network is funded jointly by NSERC, the provincial members of the Canadian Pork Council, Elanco Animal Health, Pfizer Animal Health and the Institut de biotechnologie vétérinaire et alimentaire at the Université de Montréal.

This collaborative effort is expected to bring many benefits to the Canadian swine industry. These include a better understanding of the development of infectious diseases, rapid and accurate on-farm diagnosis and eradication or control of certain diseases by effective vaccines. The ultimate goal is higher productivity in the Canadian swine industry, healthier animals, and an increased demand for Canadian swine and expanded markets. In addition, a decrease in the use of antibiotics by the industry and reduction in foodborne bacterial pathogens will be beneficial to the health of Canadians.

Do You Know Your Unspent Balance?

Because NSERC receives its funding through parliamentary appropriations, it has a responsibility to both Parliament and Canadians to ensure that the public funds put in its trust are well managed.

The Council tailors the release of research funds to the cash flow requirements of the researcher. This means that researchers and university representatives should always inform NSERC of delays in research activities that cause significant balances in research accounts.

In cases where grantees have been experiencing a slowdown in their research program, for example, deferring one instalment permits the Council to put the unspent balance to good use and gives the grantees an extra year to ramp up their activities and strengthen their research program before reapplying.

If you have any questions, please send an e-mail to casdfin@nserc.ca.

Thank You!

Large unspent balances are reviewed annually. Grantees are asked to explain why the funds have accumulated and to present a plan for the proposed use of the funds and future instalment(s). In the most recent review, most grantees opted to defer their current instalment until next year. The end result? Over $2 million was freed up for more urgent research expenditures this fiscal year.

The Council thanks the universities and researchers involved in this exercise.

Animals in Research: Draft Legislation

In summer 2001, NSERC and the Canadian Institutes of Health Research (CIHR) submitted a brief to the House of Commons Standing Committee on Justice and Human Rights on draft legislation C15-B, "An Act to amend the Criminal Code (cruelty to animals and firearms) and the Firearms Act."

The brief says use of animals in research is justified provided the proposed research has undergone both a rigorous peer review that assesses the scientific merit of the work and a rigorous ethical review according to the guidelines of the Canadian Council on Animal Care (CCAC).

The agencies also proposed two amendments to Bill C15-B: (1) that the term "negligence" be measured against a criminal standard, and (2) that the Governor in Council make regulations to assist in the interpretation of the animal cruelty provisions for that Part of the Act. Bill C15-B is now before the Senate.

The brief can be found at: www.cihr.ca/about_cihr/ethics/bill_c15_e.pdf.

Researchers who use animals for experiments are encouraged to use alternative methods when available. Research activities aimed at developing alternatives to the use of animals are eligible for NSERC support.